Work Order ID 115508

April-02-14 11:14:46 AM

115508

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Mid Tube Assembly

Start Date: 4/02/14 **Start Qty:** 1.00 *1*

Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** ML5 **Date:** 14-04-02 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	Skidtubes	0.00							
100									
Skidtubes		0.00							
Skidtubes									

Draw Nbr	Revision Nbr
D3391	I

Memo

1-Cut tube to finish length as per Dwg D3391

2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

3-Open saddles and GHW holes to Ø0.375" exept for fwd saddle hole of detail "J"

4-Remove .030" from Fwd indexing Ridge as per Dwg D3391

5-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

6-Deburr

7-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,
***DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG

8-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (10 holes) as per Dwg D3391

9-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391
DO NOT OPEN 2 MOST FWD WEARPLATE HOLES

DGL 14-4-21

DGL 14-4-21

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 **Start Qty:** 1.00 *1*
Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

10-Open .375" holes to .438" ***do not open fwd saddle holes*** DGC 14-4-21

11-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

12- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previusly drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previusly tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021
D3391-021 BATCH: 11511

13- Using DT8217, locating from two previusly drilled holes, drill remaining wearplate holes into D3391-021.

14- Locating from two fwd wearplate holes in D3391-023 drill remaining 6 wearplte holes in D3391-021 using DT8937

15- Open 10 wearplate holes in D3391-021 to 0.297" dia.

16- insert D3391-021 into D3391-23

17- insert T-pins into first and third fwd saddle holes

18- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per

19- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499".

20-Deburr and blow out all chips from inside tube, scribe batch # in D3391-023 at aft end.

DP 14-4-24

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 **Start Qty:** 1.00 *1*
Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	QC5- Inspect part completeness to step on W/O	0.00							DAS
110						9			9
QC	**Memo**	0.00				①	14.04.23		9
Quality Control									
120	Chemical Conversion Coat per QSI005 4.1	0.00							
120						DGL/JLL	14-4-28		
HandFinish	**Memo**	0.00							
Hand Finishing									
130	QC7-Inspect Chemical Conversion Coat	0.00							
130						1	0	04/14/28	
QC	**Memo**	0.00							
Quality Control									

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 **Start Qty:** 1.00 *1*
Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							
140	Skidtubes								
Skidtubes	**Memo**	0.00							
Skidtubes	1-Open float bag holes as per dwg 2-C'sink float bag holes as per dwg 3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp: 14/10/09 batch#: 128026 NOTE:ENSURE WEB IS INSERTED IN AFT END OF TUBE					- DC 14/04/28			
150	QC5- Inspect part completeness to step on W/O	0.00							
150						1	Ø	14-04-30	
QC	**Memo**	0.00							
Quality Control									

DAS
18
9-89

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 **Start Qty:** 1.00 *1*
Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160	Skidtubes								
Skidtubes	**Memo**	0.00							
Skidtubes	1-Weld crossbolt spacer as per dwg D3391 & QSI 004 A/R M128385 BE14-04-30 2-grind weld flush — DC 14/04/30								
170	QC10- Inspect visual per QSI004- ground welds	0.00							SKP 14/5/15
170									
QC	**Memo**	0.00							
Quality Control									
180	QC5- Inspect part completeness to step on W/O	0.00							SKP 14/5/15
180									
QC	**Memo**	0.00							
Quality Control									

Work Order ID 115508

April-02-14 11:14:46 AM

115508

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Mid Tube Assembly **Stop** *NS2*

Start Date: 4/02/14 **Start Qty:** 1.00 *1*

Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
185	Pressure Wash per QSI005 4.3	0.00				1	1	4-5-26	
185 HandFinish Hand Finishing	**Memo** AND REALODINE AS PER PAR09-043	0.00							
190	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum M125954	0.00				1	0	4-7-4	DAS 34 9-89
190 Powdercoat Powder Coating	**Memo** START TIME: 9:15 OVEN TEMPERATURE: 330 FINISH TIME: 945.	0.00							
200	QC3- Inspect Part Finish	0.00				1x	0	4/03/15	DAS 15 9-89
200 QC Quality Control	**Memo**	0.00							

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 **Start Qty:** 1.00 *1*
Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00				1x	0	HL	14073/15
230 HandFinish Hand Finishing	✓ Memo: 1- press fit D3591-1 spacers using DT9416 starting from 0.500" side	0.00							
	✓ 2-Install Inserts as per Dwg								
240	QC5- Inspect part completeness to step on W/O	0.00 DAS 27 9-89							
240 QC Quality Control	Memo	0.00 MH 1/16							
250	Identify as per dwg & Stock Location: W10	0.00	D412-742-0131	B115491		1x	0	HL	14073/15
250 Packaging Packaging	Memo	0.00							

Item ID: D3391-023 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 **Start Qty:** 1.00 *1*
Required Date: 4/16/14 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC21- Final Inspection - Work Order Release	0.00							
260						MLJ	14-07-16		
QC	**Memo**	0.00							
Quality Control									

4-7-16

Picklist Print

April-02-14 11:15:00 AM

Work Order ID: 115508 *115508*

Parent Item: D3391-023 *D3391-023*

Parent Item Name: Mid Tube Assembly

Start Date: 4/02/14 **Required Date:** 4/16/14

Start Qty: 1.00 **Required Qty:** 1.00

Comments:
IPP A05.10.20New Issue KJ/EC
IPP B06.02.10ECN773 dwg rev.D EC
IPP C 07.03.20 rev F dwg EC
IPP D 07.03.28 re-format EC
IPP E 07.10.31 ecn 1053P EC
IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID / Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100 *D2500-1-100* Skidtube Extrusion		Manufactured	No			100	Each	83.0000	1 **	1			
				Location		**Loc Qty**		**Loc Code**					
				HALL		83							
				82373		22							
				86065		61				6	DGC	14-4-21	
D3389-1 *D3389-1* Web		Manufactured	No			140	Each	8.0000	1 **	1	DC 14/04/28		
				Location B114969		**Loc Qty**		**Loc Code**		1			
				LG		8							
				113057		8							
D3681-1 *D3681-1* Spacer		Manufactured	No			160	Each	234.0000	5 **	5	BE14-04-30		
				Location		**Loc Qty**		**Loc Code**					
				LG		168							
				114884		168				5			
				LG001		66							
				109109		66							

Picklist Print

April-02-14 11:15:00 AM

Work Order ID: 115508 *115508*

Parent Item: D3391-023 *D3391-023*

Parent Item Name: Mid Tube Assembly

Start Date: 4/02/14 **Required Date:** 4/16/14

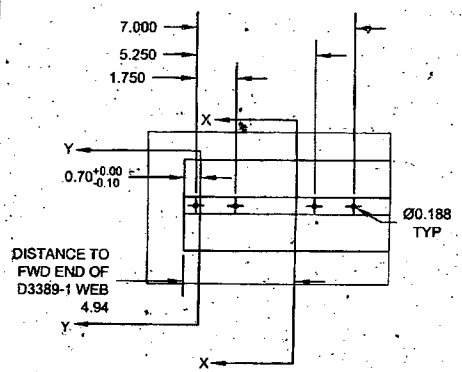
Start Qty: 1.00 **Required Qty:** 1.00

D3591-1		Manufactured	No			Each	88.0000		2
D3591-1								**	
Bushing									

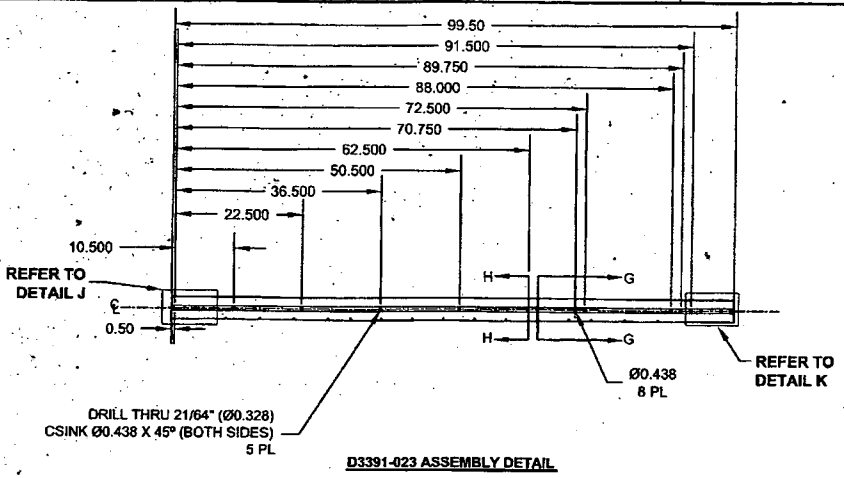
Location	Loc Qty	Loc Code
FG	10	B121446
92873	10	
FP001	78	
100699	5	
107918	36	
109107	37	

ALS4-1032-130	AELS4-1032-130	Purchased	No		230	Each	9,937.000	20	20
ALS4-1032-130								**	
Rivnut									

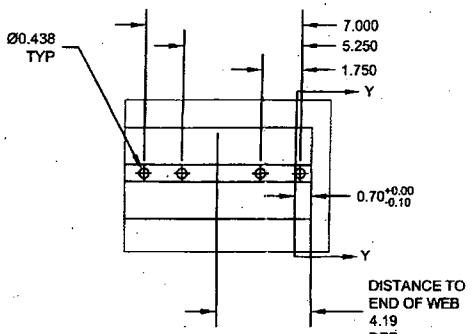
Location	Loc Qty	Loc Code
FP001	9832	
M128649	9832	
ST279	48	
M128211	48	
st510	57	
M126109	57	



DETAIL J
SCALE 4X

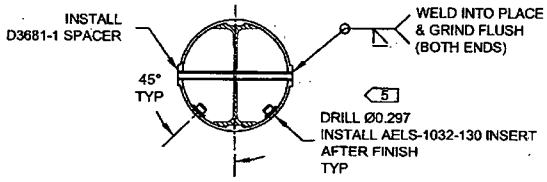


D3391-023 ASSEMBLY DETAIL

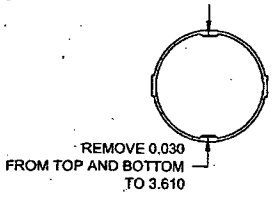


DETAIL K
SCALE 4X

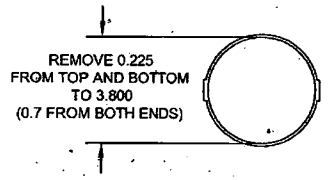
SECTION G-G
SCALE 5X



SECTION H-H 5 PL
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

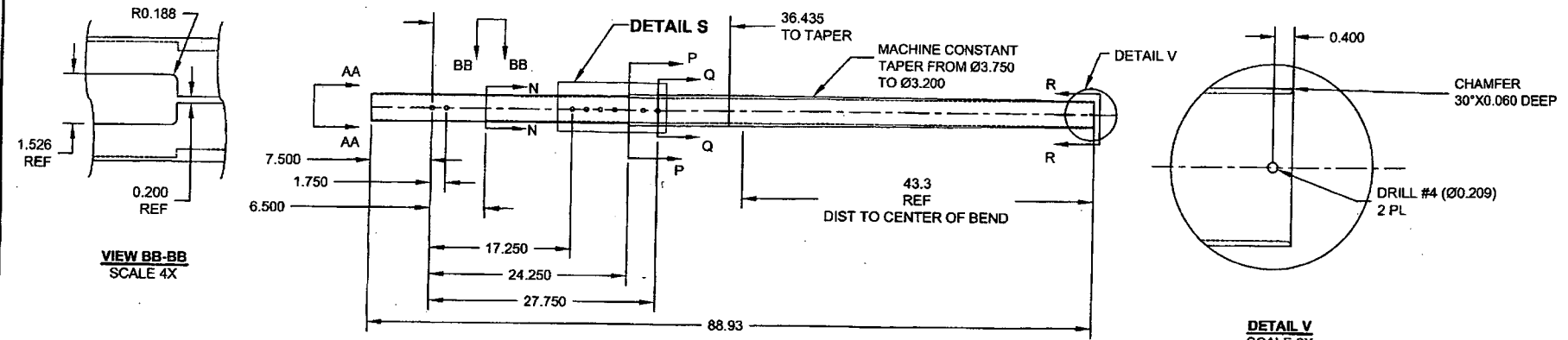
QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

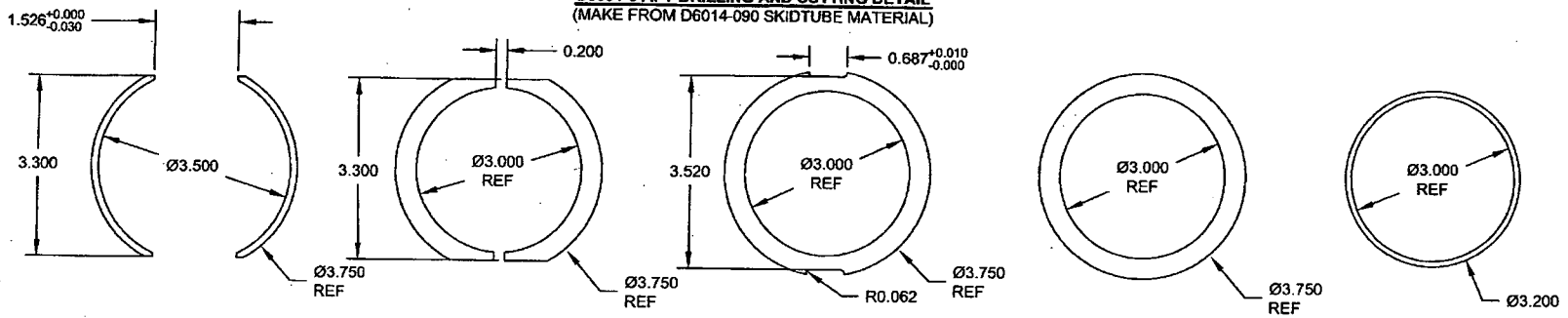
D3391-023 MID TUBE ASSEMBLY
1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
3) WELDING: PER DART QSI 004

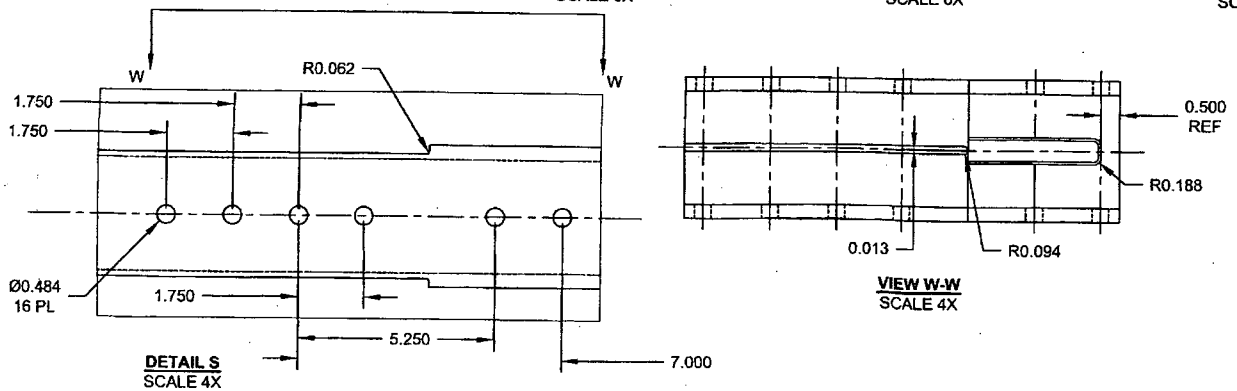
RELEASED
2011-11-04

115508 MCJ
140402

DESIGN	PH	**DART AEROSPACE USA, INC** KENT, WA
DRAWN	XDF	
CHECKED		DRAWING NO. D3391 REV. I
MFG. APPR.		SHEET 6 OF 8
APPROVED		TITLE 412 FLOAT SKIDTUBE SCALE NTS
DE APPR.		
DATE 11.10.13		







RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. I
MFG. APPR.		D3391	SHEET 7 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	11.10.13		